

INFORMATION COMMUNICATION TECHNOLOGY (ICT) BASED LIBRARY & INFORMATION SERVICES IN PHARMACY COLLEGE OF RAJASTHAN AN APPRAISAL

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Abstract

This article reports the results of a study of the Information Communication Technology (ICT) Based Library & Information services in Pharmacy College of Rajasthan an appraisal. Data were collected by using a questionnaire from 31 Pharmacy College Libraries in Rajasthan. Results show that most of Libraries have CD-Rom, E-Journals and Audio –Video. Some Pharmacy college Libraries automation status is Fully Automated, Some Partially automated and some manually. Pharmacy College Libraries using Classification system CC, DDC,UDC, and Other, Cataloguing System CCC, AACR, and Other, Circulation system using Browne, Newark, Register, Computerized and other, Form of Catalogue using Card, Computerized and Other. Most of the Libraries connected with network facility. Most of the Libraries using CSIR. INFLIBNET and INDEST-AICTE.

Keywords: Library, library science, ICT

INTRODUCTION

ICT has affected almost all areas of libraries. The ICT application tools and techniques are essential for providing efficient and effective library and information services to the users. The purpose of this study is to examine the Information Communication Technology (ICT) Based Library & Information services in Pharmacy College of Rajasthan An appraisal in terms of library functions, services. Data gathering tools used include questionnaires, observations and interviews for collecting the data from the selected 31 Pharmacy colleges libraries of Rajasthan. The results from the study reveal that a majority of the surveyed library professionals found they agree that computerization has made a positive effect which has improved the image of the Pharmacy libraries. ICT not only affect the technical services of libraries, but also shapes the library services that are offered to the library users. ICT and ICT enabled: (i) Profiling of the users; (ii) information products and resources; (iii) information services have come to the rescue of Library information Professionals in a big way in meeting such a challenge.

Information and communications technology (ICT) is often used as an extended synonym for information technology (IT), but is a more specific term that stresses the role of unified communications and the integration of telecommunications (telephone lines

and wireless signals), computers as well as necessary enterprise software, middleware, storage, and audio-visual systems, which enable users to access, store, transmit, and manipulate information.

The phrase *ICT* had been used by academic researchers since the 1980s, but it became popular after it was used in a report to the UK government by Dennis Stevenson in 1997 and in the revised National Curriculum for England, Wales and Northern Ireland in 2000.

The term *ICT* is now also used to refer to the convergence of audio-visual and telephone networks with computer networks through a single cabling or link system. There are large economic incentives (huge cost savings due to elimination of the telephone network) to merge the audio-visual, building management and telephone network with the computer network system using a single unified system of cabling, signal distribution and management.

The term Info communications is sometimes used interchangeably with ICT. In fact Infocommunications is the expansion of telecommunications with information processing and content handling functions on a common digital technology base. For a comparison of these and other terms.

EFFECT OF ICT ON PHARMACY LIBRARIES

The present study under investigation plans to have comprehensive coverage of Pharmacy College Libraries of Rajasthan for proper understanding of status and effect of technology. The collective responses from library professionals about the Information Communication Technology (ICT) Based Library & Information services in Pharmacy College of Rajasthan an appraisal:

NEED AND PURPOSE OF INFORMATION TECHNOLOGY IN LIBRARIES

The application of information technology in libraries results in increased operational efficiency. The IT increases productivity of library staff. It relieves professional staff from ordinary jobs that involves a lot of duplication so that they can be fruitfully used for user-oriented library services. It improves quality of services rendered by the library. Use of information technology ensures ease of functioning, accuracy and economy in human labor with greater speed. The exponential growth of information has made manual system redundant giving way to computerized information storage and retrieval tools. Effective and efficient handling of huge quantum of information is only possible by using computers, which have the added advantage of being highly accurate and efficient that adds value to information.

Moreover, the technology also helps in rendering services that were hitherto not possible using traditional means. The new information technology facilitates improved management of physical and financial resources. The advances in technology and its availability at lower cost, has also raised expectations of users from librarians and libraries. The new Information technology, on one hand, facilitate wider access to information for the library Users, on other hand, it facilitates wider dissemination of

information products and Services generated by the library. The availability of networks facilitates resource sharing and high-speed communication with other libraries.

IT has changed the library and information science area. Expensive buildings, valuable IT infrastructure, costly IT services and Collection, high salaried staff and multipurpose users satisfaction level. IT services are broadly accepted by library staff members and users and positive results.

RESEARCH METHODOLOGY

This survey includes 31 Pharmacy college Libraries from Pharmacy Colleges in Rajasthan. The data collected through the questionnaire was analyzed with the help of the computer. The analyzed data was used for the conclusion of the present study. At the outset a preliminary questionnaire was developed. The outline was discussed with the researcher's guide, faculty members and college librarians of Pharmacy College. After discussion the questionnaire was developed and given a trial run among the Pharmacy College Libraries. At last the questionnaires were circulated to all the Pharmacy College Libraries of Rajasthan.

The final questionnaire was sent to all the Pharmacy College of Rajasthan along with a request letter and a self addressed stamped envelope. The questionnaire were not received within one month were given reminders and they were pursued for sending their responses

Pharmacy library within the reach of the researcher were visited personally and distributed questionnaire to respective respondents and passed on necessary instructions related to the filling up of a questionnaire. The present scholar assured that the information given by them would be used for the research purpose only. The researcher could finally 31 dully filled by the Pharmacy College Librarians as per instructions.

DATA ANALYSIS:

The data collected through the questionnaire was analyzed with the help of the computer. The analyzed data was used for the conclusion of the present study.

FINDINGS

1. ICT ON DOCUMENT COLLECTION DEVELOPMENT

ICT has had a fundamental result on Library collection development and its management. In the past, the word library collection has referred to print materials. Today a library collection goes the print materials and includes the CD-ROM, online Database, E-journals, E-Books, Audio- Video. These are the additional sources of collection development that also decrease the space requirements of the Library.

E-Resources play the vital and viable role to cater the needs of information seekers in the process of advancement of society in present environment. E-Resources include such as

CD-ROM Databases, Online Databases, World Wide Web, Consortia based Services, E-Journals, OPAC, E-Books and Audio-Video

Table 1 show that E- Resources in the Pharmacy colleges Libraries of Rajasthan Many E-books, E-journals and E-databases are freely available on the internet and these are reducing the financial crisis and space requirements of the libraries. E-resources can be multiplied or accessed at multiple locations easily.

According to Table-1 20 Libraries have CD-Rom Database, 12 libraries have Online Databases, 20 Libraries have E-Journals, 11 libraries have E-Books and 14 libraries have Audio –Video.

Table No. 1 Library Collection of E-Print Resources

S.No.	Name of College	CD-Rom Database	Online Databases	E-Journals	E-Books	Audio – Video
1	ACP, Alwar	Y	Y	Y	-	Y
2	ACP, Jaipur		-	-	-	Y
3	AIP, Jaipur		-	-	-	-
4	ACP, Jaipur		-	Y	-	Y
5	BU, Niwai		Y	Y	-	-
6	BIPS, Srigananagar		-	Y	Y	Y
7	BITS, Pilani	Y	Y	Y	Y	Y
8	BNIP, Udaipur		-	-	-	-
9	GIP, Udaipur	Y	-	-	-	-
10	GCP, Suratgarh		-	-	-	-
11	JCP, Jaipur		-	Y	Y	Y
12	JNU, Jaipur	Y	-	Y	-	-
13	JVWU, Jaipur	Y	Y	Y	Y	Y
14	JPC, Jodhpur	Y	Y	Y	Y	Y
15	KCP, Kota	Y	Y	-	Y	Y
16	KCPS, Nagapur	Y	-	-	-	-
17	LMCST, Jodhpur	Y	Y	Y	Y	-
18	L.B.S, Jaipur	Y	-	Y	-	-
19	MACP, Jaipur	Y	-	-	-	-
20	MACP, Jaipur	Y	Y	Y	-	Y
21	MGCPS, Jaipur	Y	-	Y	-	-
22	NIMS, Jaipur	Y	Y	Y	Y	Y
23	PCP	Y	-	Y	-	-
24	SMS, Jaipur	Y	Y	-	Y	Y
25	RPC, Jaipur	Y	-	Y	-	-
26	SCP, Dausa	Y	-	Y	-	-
27	SBCP, Jaipur		-	-	-	-
28	SGVU, Jaipur		Y	Y	Y	Y
29	SKIP, Bikaner	Y	Y	Y	Y	Y
30	SKIP, Jaipur	Y	-	-	-	-
31	VIP, Jaipur		-	Y	-	-

2. E-RESOURCES IN PHARMACY LIBRARY

Table 2 shows that 14 (45.16 %) college have CD-Rom database out of 31 colleges. 12 (38.71%) college have Online databases. 12 (38.71%) college have WWW. 09 (29.03%) college have Consortia Based Services. 20 (64.52%) college have E-Journals. 08 (25.81%) college have OPAC. 11 (35.48%) college have E-Books. 14 (45.16 %) college have Audio- Video.

Table No. 2 E- Resources in Pharmacy Library					
S.No.		Yes	%	No	%
1	CD-Rom Databases	14	45.16	17	54.84
2	Online Databases	12	38.71	19	61.29
3	WWW	12	38.71	19	61.29
4	Consortia Based Services	9	29.03	22	70.97
5	E-Journals	20	64.52	11	35.48
6	OPAC	8	25.81	23	74.19
7	E-Books	11	35.48	20	64.52
8	Audio- Video	14	45.16	17	54.84

3. EFFECT ON IT ON SERVICES

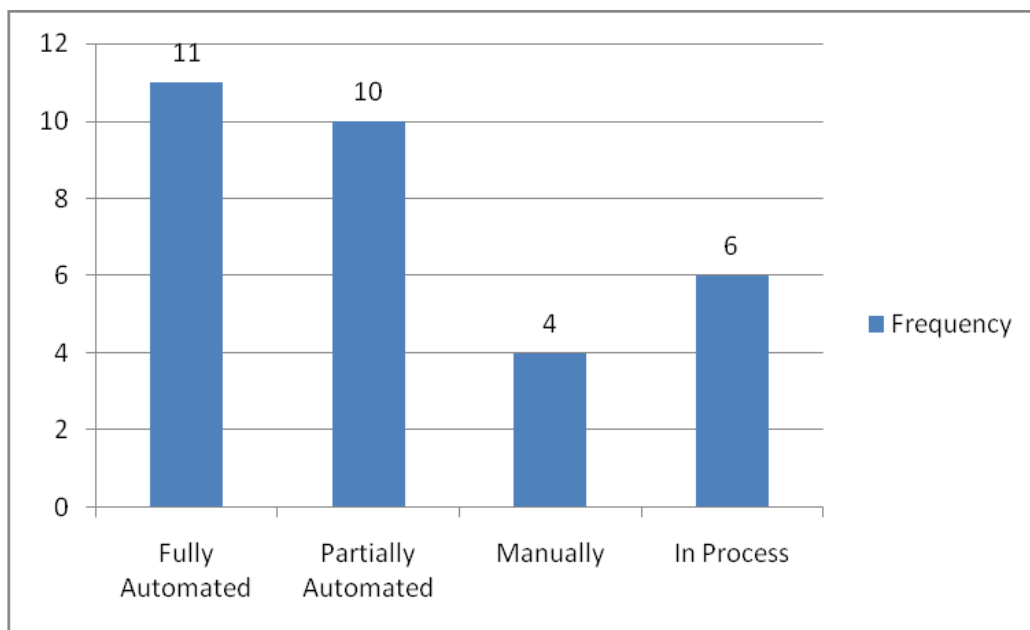
IT serves as a powerful tool in the management of library operations. The most important area in which librarians the effect of IT and visible changes is library automation. The need for automation arises to decrease the effort and time required for these jobs. Table 3 shows the level of Library automation in Pharmacy Colleges Libraries of Rajasthan.

Table 3 it is clear that out of 31 college 11 college (35.48%) are Fully Automated, 10 college (32.26%) are Partially automated, 04 college (12.90%) manually and 06 college (19.35%) are in Process of automation.

Table No. 3 Statistical Analysis Library Automation Status

Automation Status	Frequency	Percentage
Fully Automated	11	35.48
Partially Automated	10	32.26
Manually	4	12.90
In Process	6	19.35
Total	31	100.00

Figure No. 1 Library Automation Status



3. TECHNICAL TREATMENT OF COLLECTION

From the Table 4 it is clear that Some Pharmacy College uses Classification, Cataloguing, Charging system and form of Catalogue.

Analysis of data of Table 4 has been done in that 31 Pharmacy College use Classification system CC, DDC,UDC, Other and No classification (03, 15, 03 ,01,09) (9.68%, 48.39%, 9.68%,3.23%, 29.03 %) and Cataloguing System CCC, AACR, Other and No cataloguing (07, 09,04,11) (22.58%, 29.03%, 12.90%, 35.48 %) and Circulation system use Browne, Newark, Register, Computerized, other (04, 06, 04,17) (12.90%, 19.35%, 12.90%, 54.84%,) and Form of Catalogue use Card, Computerized, Other, (12,13,06) (38.71%, 41.94%, 19.35 %). (See Table 4)

Table No. 4 Statistical Analysis of Technical Treatment

Statistical Analysis of Technical Treatment		
Name of Technical Work	No. of Pharmacy College	%
1. Classification		
CC	3	9.68
DDC	15	48.39
UDC	3	9.68
Others	1	3.23
No classification	9	29.03
2. Cataloguing		
CCC	7	22.58

AACR	9	29.03
Others	4	12.90
No Cataloguing	11	35.48
3. Circulation(Charging System)	No. of Pharmacy College	%
Browne	4	12.90
Newark	6	19.35
Register	4	12.90
Computerized	17	54.84
4. Form of Catalogue	No. of Pharmacy College	%
Card	12	38.71
Computerized	13	41.94
Others	6	19.35

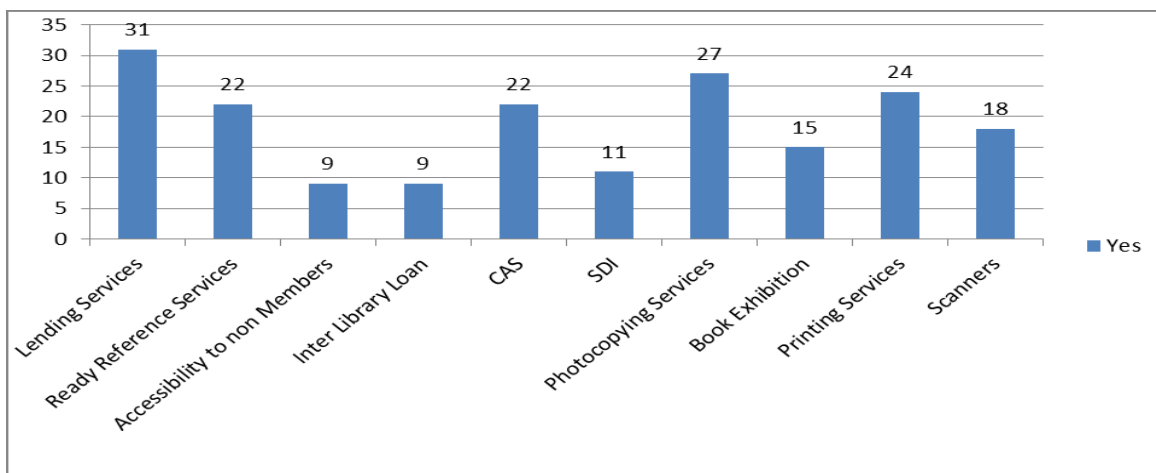
4. INFORMATION SERVICES OFFERED IN PHARMACY LIBRARIES

Table 5 shows that 31 (100 %) college provides lending services. 22 (70.97 %) college provides Ready reference services. 09 (29.03 %) college provides Accessibility to non members and Inter library Loan facility. 22 (70.97 %) college provides CAS services. 11 (35.48 %) college provides SDI services. 27 (87.10 %) college provides Photocopying Services. 15 (48.39 %) college provides Book Exhibition. 24 (77.42 %) college provides Printing Services and 18 (58.06 %) college provides Scanners services.

Table No. 5 Information Services offered in Pharmacy Libraries

Information Services offered in Pharmacy Libraries	Yes	%
Lending Services	31	100.00
Ready Reference Services	22	70.97
Accessibility to non Members	9	29.03
Inter Library Loan	9	29.03
CAS	22	70.97
SDI	11	35.48
Photocopying Services	27	87.10
Book Exhibition	15	48.39
Printing Services	24	77.42
Scanners	18	58.06

Figure No. 2 Information Services offered in Pharmacy Libraries



5. LIBRARY NETWORK

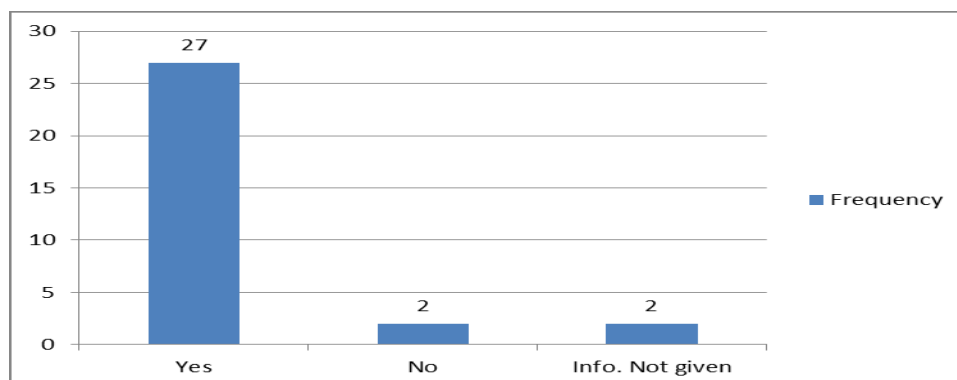
Library networks and consortium libraries are now able to provide information resources to users, if information/ documents are not available in their collection.

From the Table 6 is that clear 27 Pharmacy colleges Library (87.10 %) connected with network facility and only 02 Pharmacy colleges Library (6.45 %) not connected with network facility and 02 Pharmacy colleges Library (6.45 %) do not provide related information.

Table No. 6 Statistical Analysis of Library Connected with Network facility

	Frequency	Percentage
Yes	27	87.10
No	2	6.45
Info. Not given	2	6.45

Figure No. 3 Statistical Analysis of Library Connected with Network facility



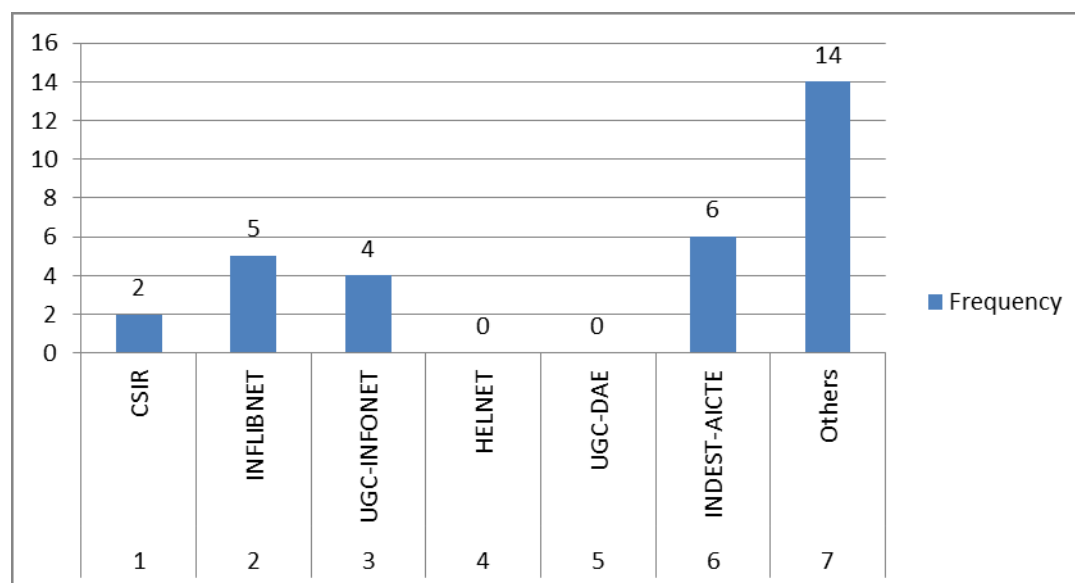
6. LIBRARY CONSORTIA- BASED SERVICES

Table 7 shows that 02 (6.45 %) college using CSIR. 05 (16.13 %) college using INFLIBNET. 04 (12.19 %) college using UGC-INFONET. 06 (19.35 %) college using INDEST-AICTE and 14 (45.16 %) college using library consortia used services.

Table No. 7 Analysis of Library Consortia in Pharmacy Library

S.No.	Library Consortia	Frequency	Percentage
1	CSIR	2	6.45
2	INFLIBNET	5	16.13
3	UGC-INFONET	4	12.90
4	HELNET	0	0.00
5	UGC-DAE	0	0.00
6	INDEST-AICTE	6	19.35
7	Others	14	45.16
	Total	31	100.00

Figure No. 4 Library Consortia in Pharmacy Library



7. REPROGRAPHY AND PRINTING FACILITIES

The technology of reprography makes a big impact on the document delivery systems. These facilities help the users to get the copies of the documents and to duplicate rare/ torn books. This helps in reducing the library budget spent on purchase of back issues of journals or reprints and to preserve the handwritten manuscripts. It also helps in resource sharing and saving users time.

Table No. 8 Reprography and Printing Facilities in the Libraries

S.NO	Name of the Pharmacy College	Printer	Scanner	CD/DVD Writer	Laptop	Photo copier
1	ACP, Alwar	-	-	-	-	-
2	ACP, Jaipur	Y	Y	-	-	Y
3	AIP, Jaipur	Y	-	-	-	Y
4	ACP, Jaipur	Y	Y	-	-	Y
5	BU, Niwai	Y	Y	Y	Y	Y
6	BIPS, Srigananagar	Y	Y	Y	Y	-
7	BITS, Piloni	Y	Y	Y	Y	Y
8	BNIP, Udaipur	-	-	-	-	-
9	GIP, Udaipur	Y	Y	-	Y	Y
10	GCP, Suratgarh	Y	Y	-	-	Y
11	JCP, Jaipur	Y	Y	-	Y	Y
12	JNU, Jaipur	Y	-	-	-	Y
13	JVWU, Jaipur	Y	Y	Y	-	Y
14	JPC, Jodhpur	Y	-	Y	-	Y
15	KCP, Kota	Y	Y	Y	Y	Y
16	KCPS, Nagapur	Y	Y	Y	Y	Y
17	LMCST, Jodhpur	Y	Y	-	-	Y
18	L.B.S, Jaipur	Y	-	-	-	Y
19	MACP, Jaipur	Y	-	-	-	Y
20	MACP, Jaipur	Y	-	Y	-	Y
21	MGCPS, Jaipur	Y	Y	-	-	Y
22	NIMS, Jaipur	Y	Y	-	-	
23	PCP, Udaipur	Y	-	Y	-	Y
24	SMS, Jaipur	Y	Y	Y	Y	Y
25	RPC, Jaipur	Y	Y	Y	-	Y
26	SCP, Dausa	Y	Y	Y	-	Y
27	SBCP, Jaipur	Y	Y	Y	-	Y
28	SGVU, Jaipur	Y	Y	Y	-	Y
29	SKIP, Bikaner	Y	Y	Y	Y	Y
30	SKIP, Jaipur	Y	Y	-	-	Y
31	VIP, Jaipur	Y	Y	-	-	Y

8. STATISTICAL ANALYSIS OF LIBRARY STAFF

In the current age of information technology the duties and functions of library professionals have changed.

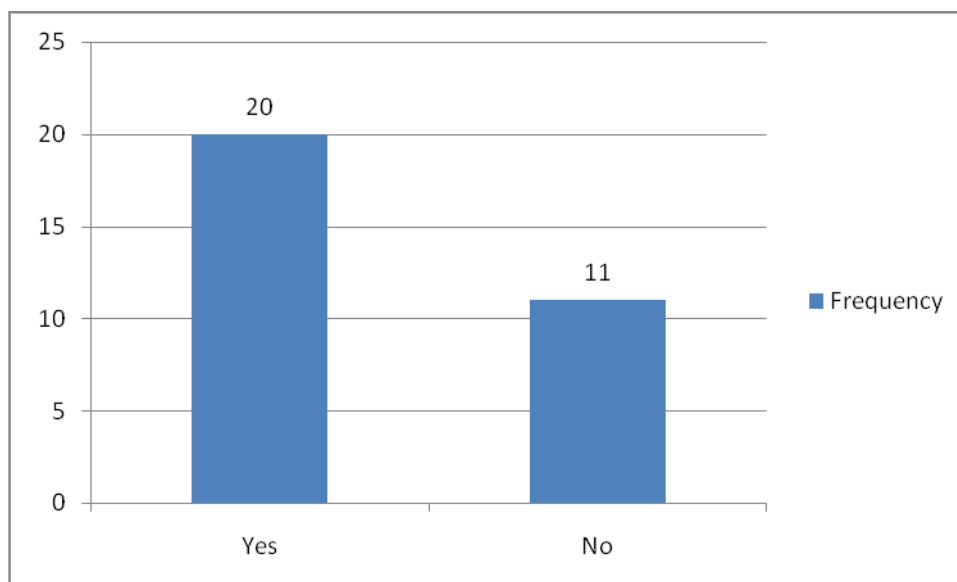
Table 9 Presents In Order to solicit the views of the college libraries about the strength of library staff a question was asked from them as to whether the exiting strength of library

staff is sufficient or not. The responses have been sorted out and manipulated in Table 9 which shows that maximum of 20 (64.52%) Pharmacy College libraries Professional staff strength enough and 11 (35.48%) Pharmacy College suffers lack of staff.

Table No.9 Statistical Analysis of Library Staff Strength in Pharmacy College Libraries

Professional staff Strength		
Sufficient or not	Frequency	Percentage
Yes	20	64.52
No	11	35.48
Total	31	100

Figure No. 5 Professional Staff Strength



During this millennium the Information will be crucial resource for society; this has a bearing on the activities of the library, adoption of new technology inevitable to cope up with the ever increasing information. Information technology is to play an important role in the work of the society and library and Information centers. The success of a library depends to large extent, on the effective organization of the house keeping activities. Automated library system offers convenient more flexible and comprehensive storage and retrieval of Information than manual system. Future libraries need to adopt a more particularly structure, as impact of Information Technology cannot be contained within one section of its service. In the years ahead, the quality of library and Information service will be largely determined by librarians skills and imagination bringing into balance the needs, priorities, technology and funding. Growing Information coupled with the changing life styles and demands of clientele offers a wide array of challenge to libraries.

Application of IT in modern libraries is helpful to obtain the right information at the right time in the right place and at the right cost. Improves the status of the library and it reduces the work load of the library professions. Finally we can conclude with T.S. Elliot's 'Choruses' from Rock" poem.

Where is the wisdom we have lost in knowledge?

Where is the knowledge we have lost in Information?

Where is the Information we have lost in Library?

And where is the new one we have gain from Information Technology.⁷

SUGGESTIONS

The following suggestions are recommended based on the research study. They are;

1. The qualified library and information science professionals should be appointed in the colleges. Library science schools and teaching departments across the country have to take significant steps to revise the library science curriculum, and incorporate significant changes to achieve the demands and challenges of the library science profession.
2. The libraries should develop the collections, services and ICT infrastructure Facilities to provide effective services to the users. Pharmacy College libraries of Rajasthan need to separate their budgets to initiate the action on IT applications, library automation and updated IT infrastructures for which the libraries require generous funds under specific heads for the procurement of hardware and its maintenance, software and collection development of electronic resources.
3. The libraries should be allocated sufficient finance in order to introduce new services and also to improve the existing services.
4. It is very important that the success of any new system or service is based on the adequate knowledge, skills of staff members. Therefore, the librarians and library staff should be properly trained when a new service or technology is introduced in the libraries.
5. It is suggested that the librarians should develop their attitudes to share the library resources among other libraries in a systematic way.
6. The librarians working in Pharmacy colleges should have more commitment and interest in taking new initiative for providing better library services and products.
7. It is suggested that the libraries purchase more E-resources such as a E-books and E-journals. The library staff should try accessing free E-resources available in public domain for the benefit of users.

8. To develop competitive personnel in technologically advanced world, high priority must be given to develop competence in IT applications, Library management and soft skills in library professionals, by the colleges/ institutions and administrators and library associations.

9. it is suggested that the Pharmacy colleges Libraries of Rajasthan should have both hard copy and E-resources and become members of library networks and consortiums.

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